



INSTRUCTIONS

-J06051

REV. 2014-11-01

AMPLIFIER INSTALLATION KIT FOR BOOM! AUDIO STAGE II FAIRING LOWER SPEAKERS

GENERAL

Dealer installation is recommended. Radio EQ update using the Digital Technician® II diagnostic tool is:

- Recommended **before** speaker INSTALLATION
- Required **before** audio system OPERATION.
- Only available through authorized Harley-Davidson dealers.

Kit Number

76000586

Models

For model fitment information, see the P&A retail catalog or the Parts and Accessories section of www.harley-davidson.com (English only).

This kit **does not fit** Twin-Cooled models.

This kit is not compatible with premium bag liners. Fitted saddlebag linings require trimming to accommodate amplifier mount and harness cover.

Installation Requirements

This kit must be installed:

- **Before** installation of the Boom! Audio Stage II Fairing Lower Speaker Kit (Part No. 76000353).
- **After** installation of a PRIMARY fairing-mounted amplifier.

The amplifier (Part No. 76000277A) installed **with this kit** must be purchased separately from a Harley-Davidson dealer.

If installing **more than TWO amplifiers**, an AUDIO IN Three-Way Y Connector (included in THIS kit) **AND** a Battery+ Three-Way Y Connector (Part No. 70270-04A, available separately) are needed.

WARNING

The rider's safety depends upon the correct installation of this kit. Use the appropriate service manual procedures. If the procedure is not within your capabilities or you do not have the correct tools, have a Harley-Davidson dealer perform the installation. Improper installation of this kit could result in death or serious injury. (00333a)

NOTE

This instruction sheet references service manual information. A service manual for this year/model motorcycle is required for this installation. One is available from a Harley-Davidson dealer.

Electrical Overload

NOTICE

It is possible to overload your vehicle's charging system by adding too many electrical accessories. If the combined electrical accessories operating at any one time consume more electrical current than the vehicle's charging system can produce, the electrical consumption can discharge the battery and cause damage to the vehicle's electrical system. See an authorized Harley-Davidson dealer for advice about the amount of current consumed by additional electrical accessories or for necessary wiring changes. (00211c)

WARNING

When installing any electrical accessory, be certain not to exceed the maximum amperage rating of the fuse or circuit breaker protecting the affected circuit being modified. Exceeding the maximum amperage can lead to electrical failures, which could result in death or serious injury. (00310a)

The amplifier installed **with this kit** requires up to **8 amps** more current from the electrical system.

Kit Contents

See Figure 11 and Table 1.

PREPARATION

WARNING

To prevent accidental vehicle start-up, which could cause death or serious injury, remove main fuse before proceeding. (00251b)

NOTE

- **WITH security siren:** With security fob present, turn ignition switch ON. See the service manual. After system is disarmed, turn ignition switch OFF. **IMMEDIATELY** remove the main fuse.
- **WITHOUT security siren:** See the service manual. Remove main fuse. Turn ignition switch OFF.

WARNING

Disconnect negative (-) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00049a)

⚠ WARNING

When servicing the fuel system, do not smoke or allow open flame or sparks in the vicinity. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury. (00330a)

1. See the service manual to perform the following generalized steps:
 - a. Remove seat. Retain all seat mounting hardware.
 - b. Remove the ECM caddy from the top of the battery.
 - c. Disconnect both battery cables, negative battery cable first.
 - d. Remove battery.
 - e. Remove fuel tank console. Remove fuel tank.
 - f. See Figure 1. Remove the wire trough cover.
 - g. Remove right side cover.
 - h. Remove left side cover.
 - i. Remove the two bolts attaching the electrical caddy under the left side cover.



Figure 1. Wire Trough

AMPLIFIER INSTALLATION

1. Remove all items from the right saddlebag. Remove saddlebag. Remove bag liners (if present).

NOTE

To minimize damage to paint during cutting and drilling, use masking tape.

2. See Figure 2. Place the saddlebag on a protected surface with the mounting (inboard) side facing up.

Cut openings for amplifier connector [289-1]:

See Figure 2, Items 4 and 5.

3. Use the template (1) to cut the openings in the saddlebag for the **fairing lower** amplifier 18-way flanged connector [289-1A].
 - a. If saddlebag lid speakers are present from a previous installation, right side speaker wires could be in the connector cutout location. Remove the wire and grommet.
 - b. Carefully cut the opening (4) **in the template (1)** for connector [289-1A].
 - c. Place the template on the saddlebag. Align the grommet (2) and latch fastener (3) openings. Trace the cut outline (4) for connector [289-1A] onto the saddlebag.
 - d. Drill two pilot holes (5) for the connector flange mounting locations.
 - e. Remove template. Verify size of opening (4) with the 18-way flanged connector [289-1A] on the saddlebag harness (see Figure 11, Item 7) from the kit.
 - f. Cut the opening (4) for connector [289-1A] into the saddlebag wall.
 - g. Drill two 9/32 in (7.25 mm) mounting holes (5).

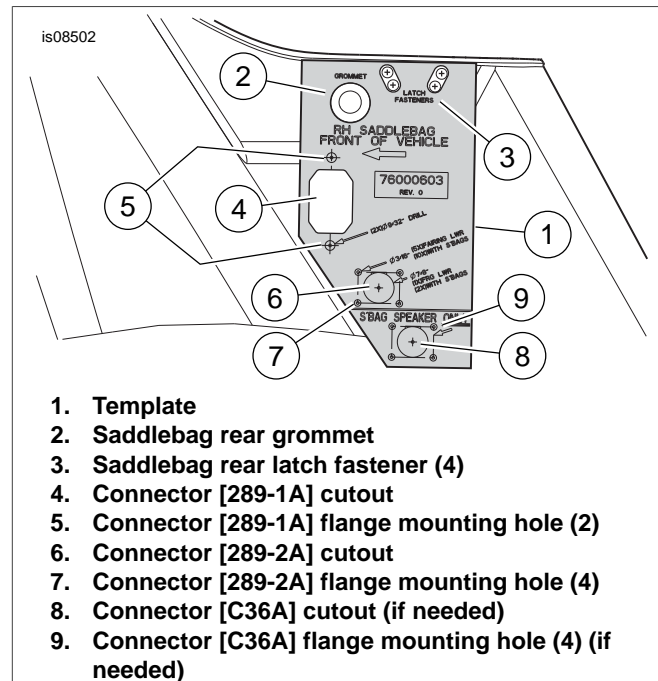


Figure 2. Right Saddlebag Drilling For Stage II Amplifier Installation

Cut openings for four-way connector [289-2]:

See Figure 2, Items 6 and 7.

NOTE

DO NOT drill four-way connector openings (Items 8 and 9) unless using saddlebag speakers.

4. Use the template to cut the openings for the **upper** four-way flanged connector [289-2A].
 - a. Place template on saddlebag again. Align the grommet and latch fasteners.
 - b. Drill four pilot holes (7) for the **upper** four-way connector [289-2A] flange mounting locations. Drill a pilot hole (6) for the connector location.
 - c. Get the saddlebag harness (7) from **this** kit. See Figure 3. Verify pilot hole placement with the four-way flanged connector.
 - d. Drill four 3/16 in (4.5 mm) holes at the connector flange mounting pilot hole locations.
Drill a 7/8 in (22.5 mm) hole at the connector pilot hole location.
 - e. Test-fit the connector [289-2A]. Shape the hole as seen on the template if necessary for proper fit.

Openings for four-way connector [C36A]:

See Figure 2, Items 8 and 9. **ONLY if using saddlebag lid speakers**, drill holes and install connector [C36A] per the instructions in **that** kit.

ALL applications:

5. Remove the metal plate (2) from the four-way bulkhead connector (1) on the saddlebag harness. Insert the connector through the saddlebag hole from the inside.
6. Slide the metal plate back onto the connector outside the saddlebag. Secure the connector with four socket head screws (3) from **inside** the saddlebag. Tighten to 35-40 **in-lbs** (4.0-4.5 N-m).

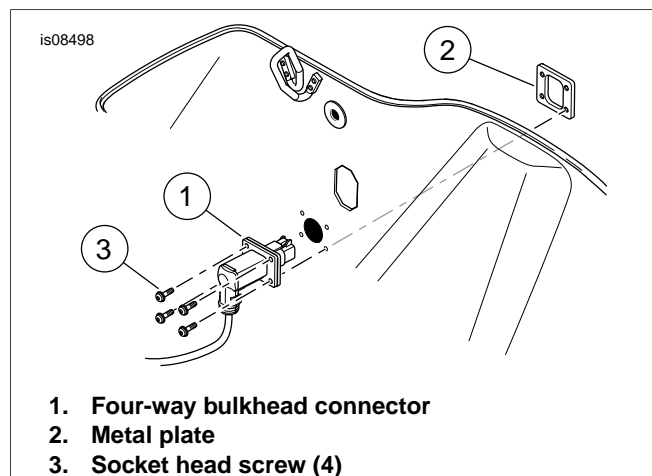


Figure 3. Four-Way Harness Connector Installation

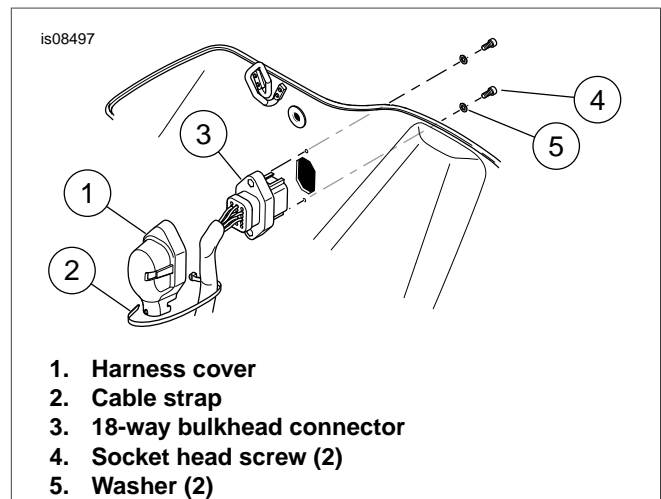


Figure 4. 18-Way Connector and Cover Installation to Right Saddlebag

7. See Figure 4. Insert the pin side 18-way bulkhead connector (3) from the saddlebag harness through the saddlebag hole from the inside. Secure the connector from **outside** the saddlebag with two socket head screws (4) and washers (5). Tighten to 35-40 **in-lbs** (4.0-4.5 N-m).
8. Snap the harness cover (1) over the 18-way connector. Secure with a cable strap (2) (see Figure 5). The harness routes inside the saddlebag after the amplifier is mounted.



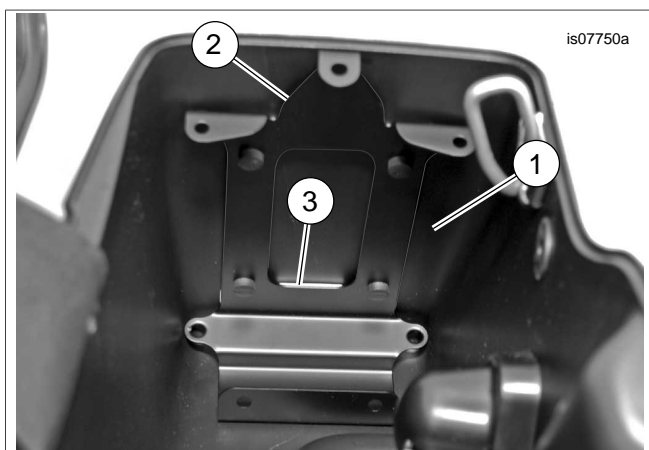
Figure 5. Harness Cover

9. See Figure 6. Clean the inside rear and bottom surfaces of the saddlebag with a 50-50 mixture of isopropyl alcohol and distilled water.

NOTE

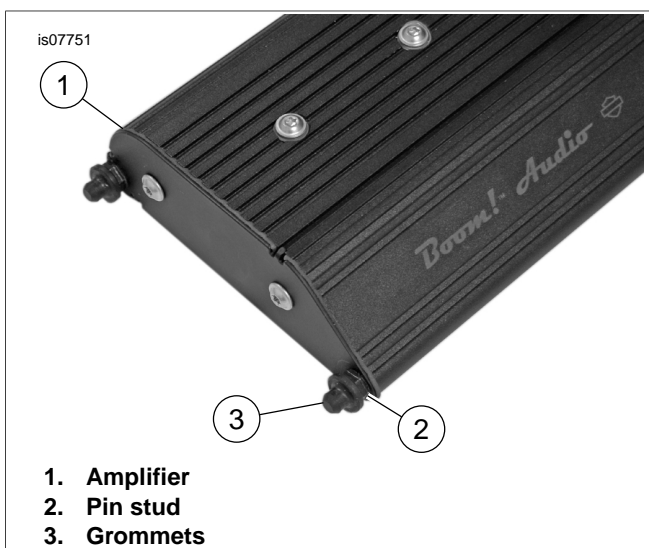
Verify that all four tape strips are contacting the saddlebag.

10. Remove the four pieces of protective backing from the amplifier bracket tape strips. Position the bracket as shown.



1. Area to be cleaned
2. Amplifier bracket
3. Tape strip (4)

Figure 6. Amplifier Bracket Installation



1. Amplifier
2. Pin stud
3. Grommets

Figure 7. Amplifier Pin Studs

11. See Figure 7. Install the amplifier pin studs in the amplifier. Tighten to 7-9 ft-lbs (9.4-12.2 Nm). Install the grommets.
12. Position the amplifier with the grommets in the holes in the bottom of the amplifier bracket. Slide the top into the bracket. Install the two hex socket button head screws. Tighten to 7-9 ft-lbs (9.4-12.2 Nm).

AMPLIFIER HARNESS INSTALLATION

NOTES

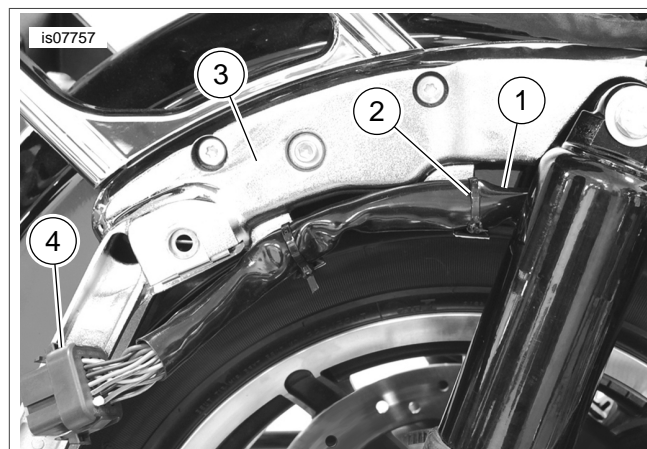
These tips help make sure all wiring fits under the seat, especially in multiple amplifier installations:

- Begin routing the vehicle-side amplifier harness from the large 18-way amplifier connector [289-1B], moving forward

on the vehicle. The large connector **does not fit** through narrower passages.

- Route all wire harnesses **under** the frame rail to avoid pinching by covers or the seat.
- Take care to route ALL amplifier harness branches away from spark plug wires. Close proximity induces spark noise into the audio system.
- When routing wires from one side of the vehicle to the other, tuck harnesses **under** the frame tray **behind** the battery to keep the battery compartment accessible.
- Route the six-way black, pink-wired audio connectors **under** the right frame rail, into the right side cover. Bundle in front of the ABS module (if present).
- Route the six-way, gray Data Link Connectors (DLCs) along the left frame rail. Bundle the connectors in a pocket of the frame in front of the battery, under the wire trough along the frame backbone.

1. See Figure 8. Route the vehicle-side amplifier harness (1) in the saddlebag mounting area, beginning with the large 18-way amplifier socket connector [289-1A], moving forward on the vehicle. Route the harness around the rear brake rotor, following the saddlebag support rail.



1. Secondary Amplifier Harness (69201090)
2. Cable strap
3. Fender support
4. Connector [289-1A]

Figure 8. Harness Routing

2. Route the harness:
 - a. behind and underneath the frame,
 - b. into the underseat battery area.
3. Use cable straps (2) to tie the harness loosely to the saddlebag support. Use the large hole near the saddlebag rear attachment point or one of the cable strap slots along the bottom of the support.

4. Temporarily install the right saddlebag into the support assembly.
 - a. Confirm that the vehicle-side harness connectors comfortably reach the saddlebag connectors.
 - b. Confirm that the amplifier harness connectors and harness routing are clear of all moving parts.
 - c. Confirm that no contact is made at full extension and compression of the shock absorber.

When sufficient clearance is confirmed, tighten the cable straps. Remove the saddlebag.

NOTE

Continue routing the harness forward on the vehicle. Heed the tips found at the beginning of this section.

5. Locate the black, four-way Molex connector [296A] near the back of the underseat area.

FLHX/FLTRX models: On a jumper harness coming from the fairing.

FLHTCU/FLHTK models: On an adapter harness with two 16-way ([162C] and [162D]) and two four-way ([296A] and [297B]) connectors.

With ONLY ONE Stage II amplifier installed in the rear: Remove the plug in the [296A] connector. Connect the amplifier harness.

With TWO or more Stage II amplifiers installed in the rear: Plug the audio input harness (15) from **this** kit into connector halves [296A] and [297B] on the adapter harness. Plug **amplifier harness** connector [296A] into the audio input harness.

6. Locate the gray six-way Data Link Connector (DLC) [91A] in the electrical caddy.
 - a. Cut the tether attaching the weather cap around the harness. Remove the cap.
 - b. Pull connector [91A] back through the electrical caddy to a location under the seat, behind the caddy.
 - c. Plug in gray six-way socket connector [91B] from the amplifier harness to connector [91A] under the seat.
 - d. Route gray six-way pin connector [91A] from the amplifier harness into the electrical caddy.
 - e. Insert the weather cap removed in Step 6a into the new pin connector [91A]. Use a cable strap (17) from the kit to attach the tether to the harness.

NOTES

- If more than two amplifiers or other accessories already use the ground post of the battery, use one of the frame ground studs.
 - If more than two amplifiers are installed on the vehicle, a Battery+ Three-Way Y Connector (Part No. 70270-04A, available separately) is required.
7. Route the battery terminal branch to the battery terminals, but **DO NOT** connect the battery cables now.

8. Route the long harness branch forward, into the wire trough, to the right side. At the front of the trough, route the wires to the fairing lowers:
 - Connectors [36RT] and [36RW] to the right lower fairing speaker enclosure.
 - Connectors [37LT] and [37LW] to the left lower fairing speaker enclosure.
9. Get the two split rubber grommets (14) from the kit. Install one grommet over each amplifier harness speaker wire set.
10. Follow instructions in the Boom! Audio Fairing Lower Speaker Kit for wiring hole location, drilling and completing the installation.

SADDLEBAG WIRING

1. See Figure 9. Plug in connector [149] of the saddlebag harness to the top of the amplifier. Route the saddlebag side harness inside the left saddlebag.

Clean the inside bottom and side surfaces of the saddlebag along the harness path with a 50-50 mixture of isopropyl alcohol and distilled water. Secure with cable straps and bases as shown.

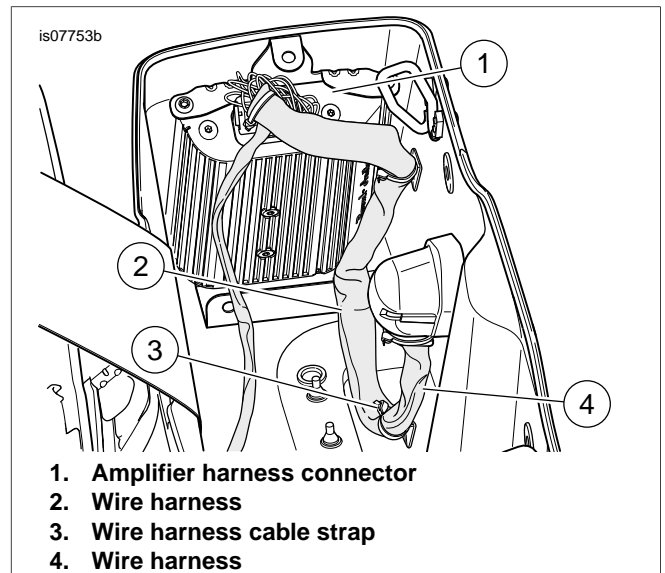
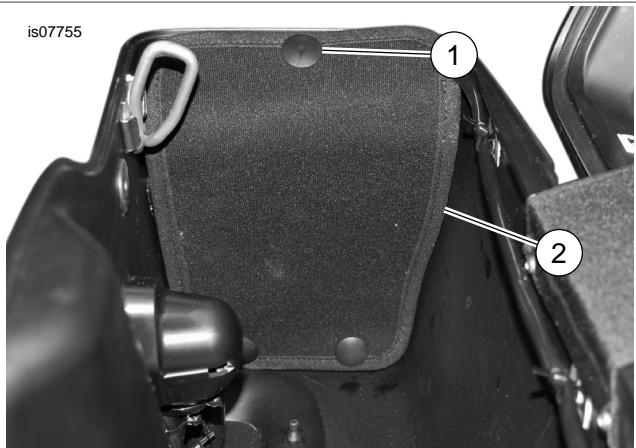


Figure 9. Inner Harness Routing

2. **Saddlebag liners (if present):** Trim saddlebag liners. Install saddlebag liners.
3. See Figure 10. Install the amplifier cover on the bracket. Secure with three clips.



1. Clip, push-in (3)
2. Amplifier cover

Figure 10. Amplifier Cover

4. Install the saddlebags. Plug in all saddlebag connectors.
5. Attach the **new** saddlebag capacity label (12) over the existing label in the right saddlebag. Note the revised load limit for the right saddlebag due to the amplifier installation.
6. See the service manual. Install the wire trough cover.
7. Install the fuel tank per the service manual. Install the fuel tank console.
8. Install the electrical caddy under the left side cover with the two bolts removed earlier. Tighten the bolts to 72-96 **in-lbs** (8.1-10.8 N-m).
9. Install left side cover.
10. Install right side cover.

COMPLETION

NOTE

To prevent possible damage to the sound system, verify that the ignition switch is **OFF** **before** attaching the battery cables.

WARNING

Connect positive (+) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00068a)

1. See the service manual. Connect the battery terminal branch to the battery terminals (red positive cable first).
 - a. Position the + ring terminal onto the positive battery terminal. Install the bolt.
 - b. Position the in-line fuse holder in a location that can be easily accessed.
 - c. Position the - ring terminal onto the negative battery terminal. Install the bolt.
 - d. Tighten both bolts to 60-70 **in-lbs** (6.8-7.9 N-m).
2. Apply a light coat of petroleum jelly or corrosion retardant material to battery terminals.
3. Install the ECM caddy per the service manual.

WARNING

After installing seat, pull upward on seat to be sure it is locked in position. While riding, a loose seat can shift causing loss of control, which could result in death or serious injury. (00070b)

4. See the service manual. Install seat.
5. Install main fuse.

SERVICE PARTS

is08495

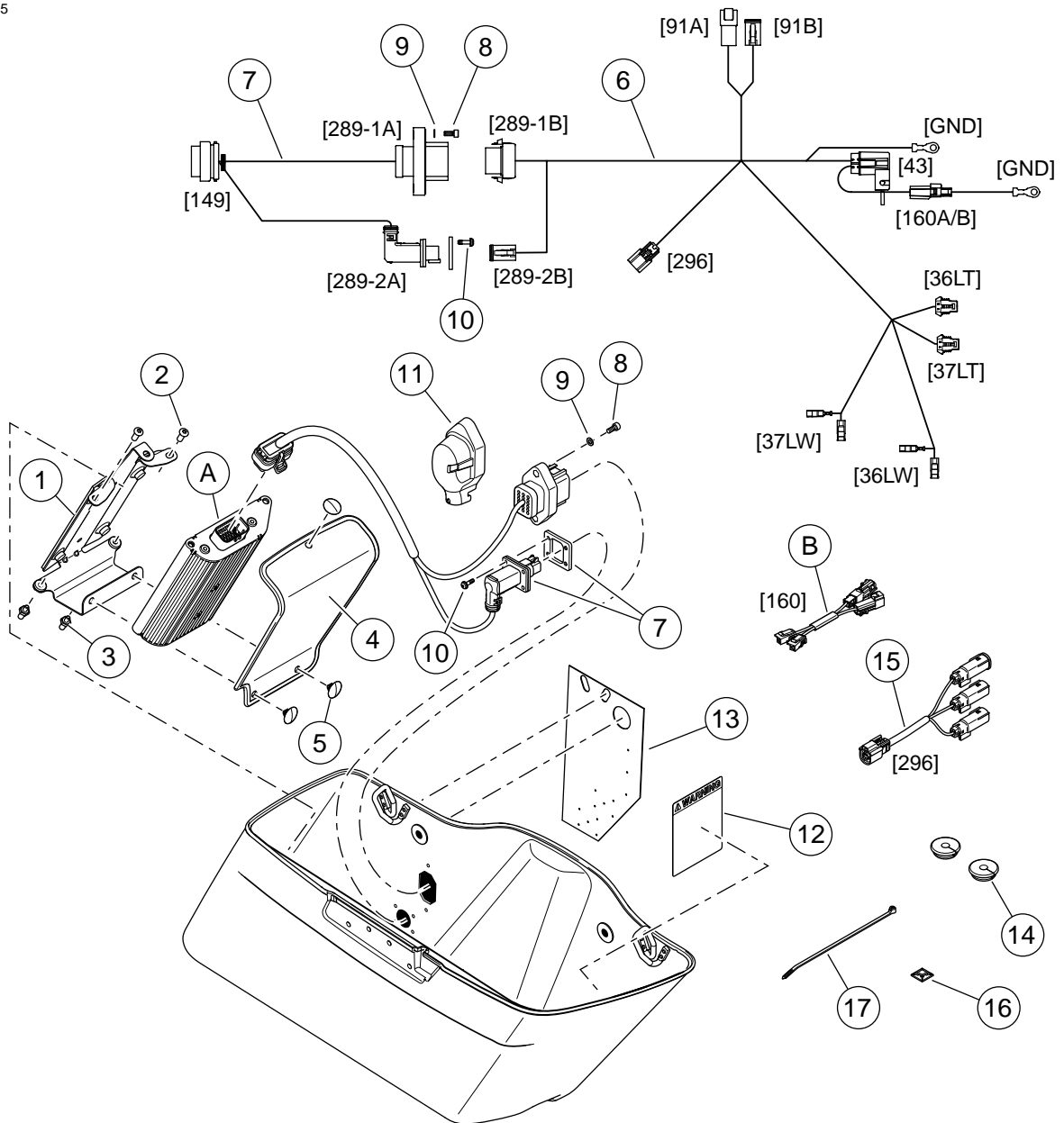


Figure 11. Service Parts, Amplifier Installation Kit For Boom! Audio Fairing Lower Speakers

SERVICE PARTS

Table 1. Service Parts

Item	Description (Quantity)	Part Number
1	Amplifier bracket	76000282A
2	Screw, hex socket button head (2), 1/4-20 x 0.62 in (16 mm) long, Grade 8, with lock patch	926
3	Pin stud (2)	12600087
4	Cover, amplifier	76000502
5	Clip, push-in (3)	12600068
6	Wire harness, vehicle side, Boom! Audio Stage II fairing lower speaker	69201090
7	Wire harness, saddlebag side, Boom! Audio Stage II fairing lower speaker	69201091
8	Screw, hex socket head, M5-0.8 x 0.47 in (12 mm) long (2)	3798M
9	Flat washer, M5 (2)	6454
10	Screw, pan head, TORX, #8-32 x 0.62 in (16 mm) long, stainless, with lock patch (4)	10200065
11	Cover, saddlebag amplifier connector	69200586
12	Saddlebag capacity label	14001047
13	Drill template, saddlebag amplifier connector (right)	76000603
14	Grommet, round, 1.0 in (25.4 mm) OD, 0.38 in (9.5 mm) ID (2)	12100071
15	Wire harness, audio input	69201092
16	Base, cable strap (10)	69200342
17	Cable strap (10)	10006
Items mentioned in text, but not included in kit:		
A	Amplifier (Part No. 76000277A, purchase separately)	
B	Wire harness, accessory adapter (Part No. 70270-04A, purchase separately if needed)	